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### (54) **GAS SEPARATION MEMBRANE**

#### (57) Abstract:

PURPOSE: To obtain a gas separation membrane excellent in oxygen permeability, by using a polyurethane/silicone copolymer of which the Si-O content is increased by introducing a polysiloxane structure into the main chain of polyurethane.

CONSTITUTION: A substantially linear polyurethane/silicone

copolymer obtained by heating and reacting diisocyanate,  $\alpha$ ,  $\omega$ -dichloropolydiorganosiloxane and glycol in an org. solvent is dissolved in a film forming liquid solvent to be cast and applied to an appropriate support and the solvent is evaporated from the formed film by heat treatment to obtain a homogenous membrane with a thickness of 0.05W30 $\mu$ m. By subjecting the surface of this membrane to sputter etching treatment, coefficient of gas permeation and coefficient of gas separation thereof are further enhanced.

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